LoMARINE®

Bio-optimized Magnesium

Dr. Paul Lohmann®



The first range of chelated marine magnesium, backed by science

Chelated Marine Magnesium by Dr. Paul Lohmann®

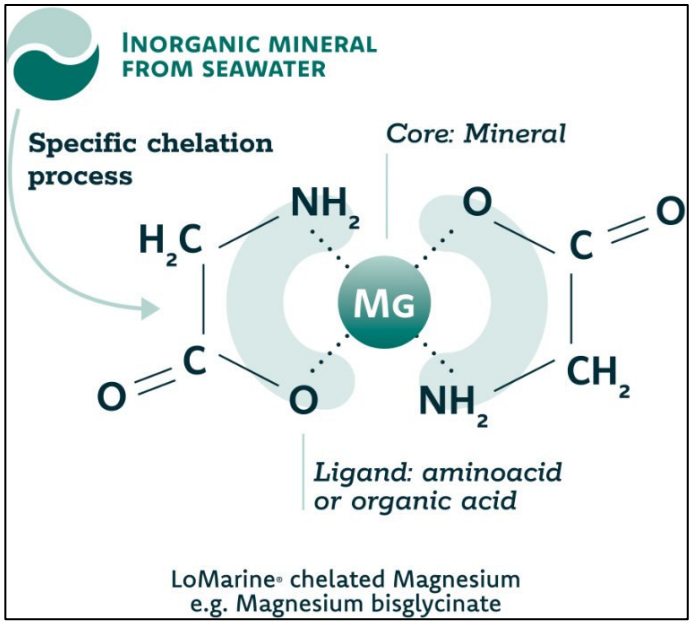
Where the sea meets science

Dr. Paul Lohmann®, a German family-owned company since 1886, is the world's leading developer and manufacturer of high value mineral salts for food, food supplements, pharmaceuticals and cosmetics.
To respond to growing consumer demand for natural products, Dr. Paul Lohmann® has used its expertise to create LoMarine®, the first range of chelated marine magnesium.

The LoMarine® range combines a unique source of seawater magnesium and a special chelation process to provide easy-to-formulate, bioavailable and bio-digestible magnesium products.

The only supplier of marine Magnesium Bisglycinate and Magnesium Citrate Malate.

Chelates: an optimized form of magnesium



LoMarine® quality is guaranteed by:

A 3-step validation process to ensure fully-chelated magnesium:

- IR spectroscopy
- NMR spectroscopy
- X-ray diffraction

High quality certification grades:

- GMP
- FSSC 22000/ISO 22000
- DIN EN ISO 9001:2015

Traceable manufacturing:

- Made in Germany

A chelate is a complex molecule resulting from a process that bonds a metal to ligand ions or molecules which wrap around it.

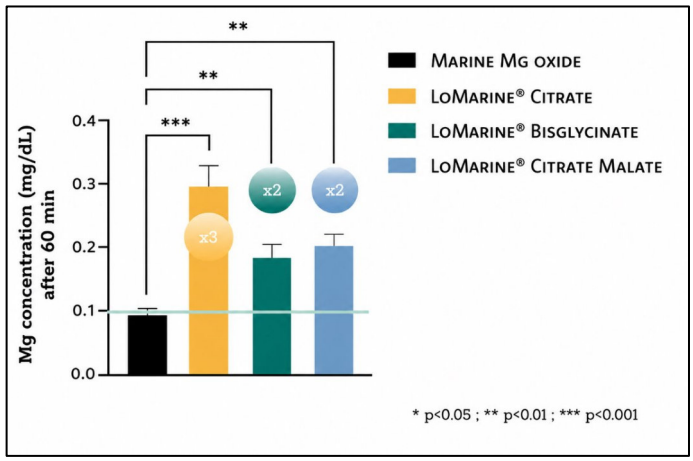
This creates a perfect protective shield for the mineral and improves its bioavailability, metabolism, tolerance and stability.

Bio-optimized Magnesium Backed by Science

Better bioavailability

To confirm the scientific literature observing that organic salts are more bioavailable than inorganic ones, two pre-clinical studies were performed on LoMarine® salts:

- An in vitro absorption assay on Caco-2 cells showed a better absorption of LoMarine® chelated magnesium up to 3-fold compared to marine Magnesium Oxide.
- An in vivo bioavailability study performed on mice with a single-dose of the different forms of LoMarine® indicated complementary types of magnesium delivery systems: immediate-release, extended-release and delayed-release.

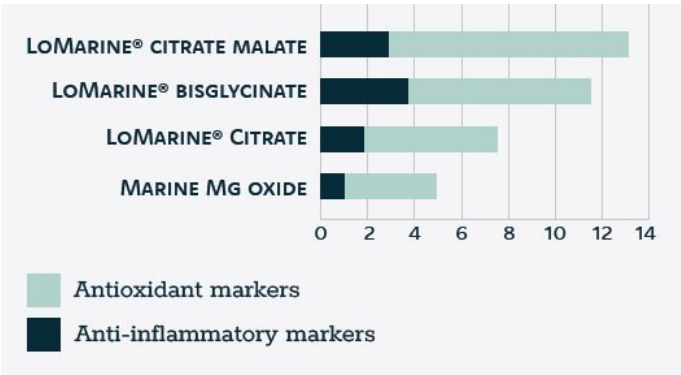


In vitro absorption of LoMarine® chelates and marine Magnesium Oxide in Caco-2 cells.

Better bioefficacy

Gene expression of 14 characteristic markers involved in antioxidant and anti-inflammatory mechanisms was assessed with LoMarine® chelates (bisglycinate, citrate malate and citrate), and marine Magnesium Oxide. Our range of LoMarine® exerts very interesting anti-inflammatory and antioxidant properties by acting on key-mediators:

- Reduction of pro-inflammatory markers such as TNF-α and COX-2 and promotion of anti-inflammatory mediators like TGF-β and IL-10
- Modulation of the antioxidant/pro-oxidant balance especially through the upregulation of the antioxidant enzymes catalase and glutathione reductase.



PCR analysis of gene expression of 14 markers in the presence of different forms of magnesium.

LoMarine® Bisglycinate

- 4x more **anti-inflammatory** than magnesium oxide
- **Delayed-release** dosage form

LoMarine® Citrate Malate

- 3x more **bioactive** than magnesium oxide
- **Immediate-release** dosage form

LoMarine® Citrate

- 3x more globally **absorbed** than magnesium oxide
- **Extended-release** dosage form

Lavernhe M et al (2025). J Nutr Health Sci. 12(1):101

Why choose LoMarine®?

- **Marine origin**
  The first range of chelated Magnesium from seawater
- **Mineral expert**
  Dr. Paul Lohmann®, producer of mineral salts since 1886
- **Backed by science**
  High bioavailability and effectiveness demonstrated by proprietary studies on LoMarine®
- **Best quality magnesium**
  High quality standards and certifications to guarantee the best minerals



LoMarine® for formulators

- **Fully adaptable range** for various food supplement delivery systems

LoMarine® for consumers

- **Magnesium from the sea**
- **Improved bioavailability**
- **Multiple health benefits**
- **High tolerance**

A range of Magnesium

LoMarine® Bisglycinate

LoMarine® Citrate MALATE

LoMarine® Citrate







Want to know more about LoMarine®? Contact us for more information.

Dr. Paul Lohmann®
Your Competent Partner for High Value Mineral Salts

With over 140 years of producing mineral salts that meet the highest quality standards, we have established ourselves as the leading global supplier to the pharmaceutical, biopharmaceutical, nutritional supplement, food and personal care industries.

Our Expertise

- GMP and DIN EN ISO 9001 certified production sites
- FSSC 22000 certified
- Processes according to HACCP
- Compliance and commitment with the FSMA (food safety modernization act)
- Tailor-made and innovative solutions according to customer requirements
- Highly qualified experts in R&D lab and application technology with long-term experience and a wide variety of possibilities to develop new products and applications
- Joint product and application development together with our customers
- Our manufactured products are exclusively Made in Germany
- A wide range of more than 400 different Mineral Salts
- Products in compliance with the most relevant pharmacopoeias (Ph.Eur., USP, BP), food codices (FCC, E-numbers, etc.) and customer specific requirements
- Regulatory documentation (CEP, ASMF, etc.)
- REACH compliance on request
- Wide range of production equipment
- Social and environmental standards (Sustainability report, EcoVadis, DIN EN ISO 50001, Sedex)
- High purities can be realized according to specific requirements

Modification

- Physical properties
- Chemical properties
- Packaging
- Labeling

The information given in the document corresponds to our current knowledge. We warrant in the frame of our General Terms and Conditions of Sale that our products are manufactured in accordance with the specifications. However, we disclaim any liability with regard to the suitability of our products for a particular purpose or application or their compatibility with other substances. Tests have to be performed by the customer who also bears the risk in this respect. Nothing herein shall be construed as a recommendation to use our products in conflict with third parties' rights.

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www.lohmann-minerals.com

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